

REMARKS

Applicant appreciates the thorough examination of the present application as evidenced by the Office Action of November 28, 2006. Applicant confirms the election of the Group II claims (Claims 6-17) without traverse. Applicant has withdrawn the remaining claims from consideration herein. Applicant has amended Claim 6 to include the recitations of dependent Claim 7 and has cancelled Claim 7 from the present application. Applicant has also amended the dependencies of Claims 8-10 to conform to the cancellation of dependent Claim 7. Applicant respectfully submits that the pending claims are in condition for allowance for at least the reasons discussed herein.

The Restriction Requirement

Applicant confirms the oral election of the Group II claims (Claims 6-17) without traverse. Applicant has withdrawn the remaining claims from consideration herein.

The Section 102 Rejection

Claims 6-9 and 12-15 stand rejected under 35 U.S.C. §102(e) as being anticipated by United States Patent Application Publication No. 2004/0063456 to Griffin (hereinafter "Griffin"). See Office Action, page 4. Applicant respectfully submits that many of the recitations of these claims are neither disclosed nor suggested by Griffin for at least the reasons discussed herein. For example, amended independent Claim 6 recites:

A mobile terminal comprising:
a housing;
a microphone positioned in the housing;
a speaker positioned in the housing remote from the microphone; and
a multi-mode audio processor circuit configured to apply noise cancellation to first and second microphone inputs thereof, the first microphone input being coupled to the microphone and the second microphone input being coupled to the speaker,
wherein the speaker comprises a transducer and wherein the multi-mode audio processor circuit is configured to transmit sound from the transducer in a first mode of operation and to generate a composite audio signal from sound energy received by the microphone and the transducer in a second mode of operation.

Applicant submits that at least the highlighted recitations of amended independent Claim 6 are neither disclosed nor suggested by Griffin for at least the reasons discussed herein.

In particular, the Office Action points to a microphone 14d and a speaker 14a of Figure 4 of Griffin as providing the teachings of the microphone and speaker as recited in amended independent Claim 6. *See* Office Action, page 4. Applicant respectfully disagrees. In particular, Griffin discusses first and second communication modules configured to communicate so as to allow, for example, hands-free operation of one of the communication modules. *See* Griffin, Abstract. Figure 4 of Griffin illustrates a communication module configured to be received in a user's ear for hands-free operation of a second communication module. *See* Griffin, paragraph 32. As discussed in Griffin, the microphone 14d may pick up more than the user's voice, thus, some embodiments of Griffin may provide a noise cancellation circuit to filter out background noise, *i.e.*, noise other than the user's voice. *See* Griffin, paragraph 33. Devices for and methods of noise cancellation are not new.

In stark contrast, Claim 6 recites:

wherein the speaker comprises a transducer and wherein the multi-mode audio processor circuit is configured to transmit sound from the transducer in a first mode of operation and to generate a composite audio signal from sound energy received by the microphone and the transducer in a second mode of operation.

In other words, the speaker (transducer) operates in two modes, a first mode where the transducer is configured to transmit noise and a second mode where the transducer is configured to operate in combination with the microphone to generate noise. Thus, as discussed in the specification of the present application:

...portable electronic devices including multi-mode audio processors according to embodiments of the present invention **may apply two-microphone noise cancellation or other audio signal processing algorithms without providing two physical microphones in the housing of the portable electronic device.**

See Specification, page 4, lines 29-33 (emphasis added). Nothing in the cited portion of Griffin discloses or suggests the recitations of Claim 1 as set out above for at least these reasons. Griffin merely discusses a hands-free system having a microphone and a speaker and may have noise cancellation capability to filter out background noise inadvertently received by the microphone. Accordingly, Applicant respectfully submits that Claim 1 and the claims that depend therefrom are patentable over Griffin for at least the reasons discussed herein.

Independent Claim 12 recites:

A mobile terminal comprising a multi-mode audio processor circuit operatively associated with a transducer, **the multi-mode audio processor circuit**

being configured to operate the transducer as a speaker during a first mode of operation and a microphone during a second mode of operation.

Applicant respectfully submits that at least the highlighted recitations of Claim 12 are neither disclosed nor suggested by Griffin for at least the reasons discussed herein. The Office Action points to the same portions of Griffin cited as teaching the recitations of Claim 1 as teaching the recitations of Claim 12. *See* Office Action, page 5. Thus, Applicant submits that independent Claim 12 is patentable over Griffin for at least the reasons discussed above with respect to Claim 1. Furthermore, as discussed above, Griffin discusses a hands-free system having a microphone and a speaker and may have noise cancellation capability to filter out background noise inadvertently received by the microphone. Nothing in Griffin discloses or suggests a transducer that operates as both a speaker and a microphone as recited in independent Claim 12. Accordingly, Applicant submits that independent Claim 12 and the claims that depend therefrom are patentable over Griffin for at least the reasons discussed herein.

The Section 103 Rejections

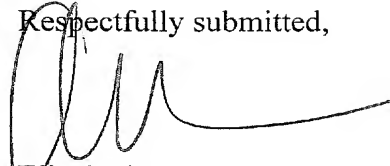
Claims 10 and 16 stand rejected under 35 U.S.C. §103 as being unpatentable over Griffin in view of United States Patent No. 5,046,103 to Warnaka (hereinafter "Warnaka"). *See* Office Action, page 5. Claims 11 and 17 stand rejected under 35 U.S.C. §103 as being unpatentable over Griffin and Warnaka in further view of United States Patent No. 5,251,262 to Suzuki (hereinafter "Suzuki"). *See* Office Action, page 6. As discussed above, the dependent claims are patentable at least per the patentability of the independent base claims from which they depend.

CONCLUSION

Applicant submits that the pending claims are in condition for allowance for at least the reasons discussed above. Favorable reconsideration of this application is respectfully requested. If, in the opinion of the Examiner, a telephonic conference would expedite the examination of this matter, the Examiner is invited to call the undersigned attorney at (919) 854-1400.

In re: Matt Murray
Serial No.: 10/743,670
Filed: December 22, 2003
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Respectfully submitted,

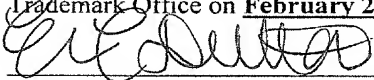


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Erin C. Dutton